(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 October 2011 (06.10.2011)

PCT

(10) International Publication Number
WO 2011/123836 A2

(51) International Patent Classification:
A61K 9/16 (2006.01) *A61K 31/4025* (2006.01)
A61K 31/4178 (2006.01) *A61K 31/403* (2006.01)
A61K 31/439 (2006.01) *A61K 31/4174* (2006.01)
A61K 31/137 (2006.01) *A61K 31/445* (2006.01)
A61K 31/222 (2006.01) *A61K 31/215* (2006.01)
A61K 31/216 (2006.01) *A61P 13/10* (2006.01)
A61K 31/4725 (2006.01)

(21) International Application Number:
PCT/US2011/031020

(22) International Filing Date:
1 April 2011 (01.04.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/320,202 1 April 2010 (01.04.2010) US

(71) Applicant *(for all designated States except US)*: **THERAVIDA, INC.** [US/US]; 400 S. El Camino Real, Suite 1200, San Mateo, CA 94402 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **PABORJI, Mehdi** [US/US]; 400 S. El Camino Real, Suite 1200, San Mateo, CA 94402 (US). **TUOHY, III, Robert, V.** [US/US]; 600 Markley Street, Norristown, PA 19401 (US). **FREED, Peter, R.P.** [US/US]; 600 Markley Street, Norristown, PA 19401 (US). **FLUGEL, Roger, S.** [US/US]; 400 S. El Camino Real, Suite 1200, San Mateo, CA 94402 (US).

(74) Agent: **TAHMASSEBI, Sam, K.**; TechLaw LLP, 10755 Scripps Poway Parkway, Suite 465, San Diego, CA 92131 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

WO 2011/123836 A2

(54) Title: PHARMACEUTICAL FORMULATIONS FOR THE TREATMENT OF OVERACTIVE BLADDER

(57) Abstract: Disclosed herein are pharmaceutical compositions comprising a plurality of first beads each comprising: a core; a first layer comprising pilocarpine or a pharmaceutically acceptable salt thereof; and a second layer comprising a first polymer. Also disclosed are pharmaceutical compositions comprising a plurality of second beads each comprising: a core; and a first layer comprising tolterodine or a pharmaceutically acceptable salt thereof. Further disclosed are pharmaceutical formulations comprising: a) a plurality of the first beads; b) a plurality of the second beads; or c) a plurality of the first beads and a plurality of the second beads.